



SITE SAFETY PLAN
for
SMALL-SCALE, SHORT-DURATION HAZARDOUS WASTE OPERATIONS

I. SITE OVERVIEW**Site Name**

Pierce Waste Oil (aka MORECO)

Location

1925 East Madison Street, Springfield, Illinois

Tasks to be accomplished:**Task A**

Collect soil and groundwater samples from test pits and analyze for Target Compound List

Task B

Collect soil and groundwater samples using Geoprobe and analyze for Target Compound List

Start Date/Time: October 2, 2000

Complete Date/Time: October 5, 2000

Site Description/History

Waste oil recycling operations began at this site in 1932. Prior to that time, the site was believed to have been a swampy area that was operated as a clay pit for brick-making and was believed to have been subsequently backfilled as a refuse landfill. Pierce constructed its refining equipment and waste oil storage on top of the old landfill. They collected various types of waste oil from commercial and industrial sources throughout the Midwest. A "Notification of Hazardous Waste Activity" form dated January 27, 1986, submitted by MORECO Energy, Inc. indicated that the company was engaged in the transportation, treatment, storage, and disposal of hazardous waste and marketing and burning of hazardous waste fuel.

Topography

The site is currently vacant except for two remaining buildings in the southwest portion of the property. The topography is relatively flat with the exception of some remaining concrete berms.

Surrounding Population

The site is situated on approximately 4 acres of land in an industrial and residential area on the northeast side of Springfield. The property is bordered by Sangamo Construction Company on the north; by the Illinois Central Gulf Railroad (ICGR), Capital City Ready Mix, and Contractor City Lumber on the west; and ICGR and open areas to the west and south. Residential areas are located 700 feet west of the site. Approximately 12,500 people live within a 1-mile radius of the site.

Additional Information

II. PERSONNEL

Duty/Name

- 1 Project Manager/Ann Cross
- 2 Geoprobe Operator/Mark Densmore
- 3 Sampler (Safety Officer)/Mark Wagner
- 4 Chain of Custody/Ted Prescott
- 5
- 6

III. HAZARD EVALUATION

Chemical hazards anticipated:

Chemical Name	PEL	IDLH	IP	Relative Response	LEL	Route of Entry
1,1-Dichloroethane	100 PPM	3000 PPM	11.06 eV	100 PPM	5.4%	Inh, Ing, Con

Chemical Name	PEL	IDLH	IP	Relative Response	LEL	Route of Entry
Ethylbenzene	100 PPM	800 PPM	8.76 eVf	100 PPM	0.8%	Inh, Ing, Con

Chemical Name	PEL	IDLH	IP	Relative Response	LEL	Route of Entry
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Benzo(a)anthracene	0.2	80 mg/m ³	0.1	Inh, Con
	mg/m ³		mg/m ³	

Chemical Name	PEL	IDLH	IP	Relative Response	LEL	Route of Entry
2,4-Dinitrotoluene	1.5 mg/m ³	50 mg/m ³	?	1.5 mg/m ³	?	Inh, Abs, Ing, Con

Chemical Name	PEL	IDLH	IP	Relative Response	LEL	Route of Entry
Nitrobenzene	1 PPM	200 PPM	9.92 eV	1 PPM	1.8	Inh, Abs, Ing, Con

Physical hazards anticipated:

Hazard:	Heat Stress
Hazard control:	Provide plenty of ice water and a shady spot to rest. Frequent breaks if necessary.
Hazard:	Presence of heavy equipment and open test pit excavations
Hazard control:	Samplers will wear hard hats and steel-toed boots when near the backhoe and Geoprobe. They will take care to avoid the open test pit excavations.

IV. SITE CONTROL

Description of Exclusion Zone and Boundaries (Site Map Attached)

The exclusion zone will be an area of 20 feet in diameter from which the sample will be collected. Due to the fact that many sample locations will be utilized, the exclusion zone will be constantly changing from one sample area to the next.

Description of Contamination Reduction Zone and Boundaries

CRZ will be an area considered contaminated but not within the boundaries of the above stated exclusion zone.

Description of Support Zone and Boundaries

The support zones are not considered contaminated. This will be areas around the support vehicles and any other area of the site that can be considered clean.

Hand signals

- | | |
|--|----------------------------------|
| 1. Hands gripping throat ----- | Out of air, can't breathe |
| 2. Grip partner's wrist or both hands around waist ----- | Leave area immediately |
| 3. Hands on top of head ----- | Need assistance |
| 4. Thumbs up ----- | OK, I am all right, I understand |
| 5. Thumbs down ----- | No, negative |

Standard Operating Procedures:

A. Sampling procedures: Conduct sampling in accordance with the IEPA BOL Sampling Procedures Guidance Manual.

B. Excavations: if excavations will be made, comply with the Underground Utility Facilities Damage Prevention Act by contacting JULIE at least two working days in advance at 800-892-0123. The Act defines "excavation" as "...any operation in which earth, rock, or other material in or on the ground is moved, removed, or otherwise displaced by means of any tools...."

C. Permit-required Confined Spaces: A permit-required confined space is an area that has limited means for entry and exit, was not designed for continuous employee occupancy, and has the potential to contain a serious health or safety hazard (usually a hazardous atmosphere). Examples include manholes, tanks, vaults, excavations. IEPA personnel are not authorized to enter permit-required confined spaces.

D. Heat Stress: At temperatures above 80 degrees F., especially when PPE is used, heat stress is often the greatest site hazard. Provide appropriate cooling equipment, cooled drinking fluids, and frequent breaks. Provide at least ten gallons of water at the site for drenching. Prevent and treat heat stress in accordance with your first aid training.

E. Material Safety Data Sheets: Obtain MSDS for known chemical hazards and attach for review by all site personnel.

F. All personnel arriving or departing the site should log in and out with the Record-keeper. All activities on site must be cleared through the Project Team Leader. There will be a minimum of two people assigned to each task (buddy system).

G. Normal and Emergency Communications: A cell phone is mandatory.

H. If adverse weather is possible, monitor a local radio broadcast station or other service to stay abreast of the weather.

I. All operations and equipment will comply with OSHA Regulations 29 CFR 1910.120 and other applicable elements of OSHA 29 CFR 1910 and 1926. Before site operations begin all employees involved in these operations will have read and understood this site safety plan.

J. Training and medical monitoring: All routine site personnel are required 40-hour HAZWOPER training and medical monitoring. Employees with 24-hour training may perform specific tasks, provided that it is ensured that they will not be exposed to health hazards above permissible exposure limits. Visitors or support personnel who remain in the support zone are not required health and safety training.

K. Opening drums and containers: due to the possibility of internal pressurization, either shielding or a remote drum opener shall be used.

L. Other:

V. PERSONAL PROTECTIVE EQUIPMENT

Based on evaluation of potential hazards, the following levels of personal protective equipment have been designated for the applicable work areas or tasks. No changes to the specified levels of protection shall be made without the approval of the site safety officer and the project team leader.

Work Area/Zone

Job Function/Task

Level of Protection: B C D Other

Support Zone	Chain of Custody	D
Work Area/Zone Exclusion Zones	Job Function/Task Soil and Groundwater sampling	Level of Protection: B C D Other C(may increase to B)
Work Area/Zone CRZ	Job Function/Task Decontamination Area	Level of Protection: B C D Other C
Work Area/Zone	Job Function/Task	Level of Protection: B C D Other

The following specific PPE items have been selected:

Latex gloves	X	Nitrile gloves	Neoprene gloves
Butyl gloves		Silver Shield gloves	X
X Latex outer boots		Tyvek coveralls	X
X APR Respirator		SCBA	Hardhat
X APR Cartridge:	X	Safety Glasses	Safety Goggles
Ear Protection		Cotton Coveralls	Other:
Other:		Other:	Other:

VI. AIR MONITORING

The following air monitoring instruments shall be used on-site at the specified intervals.

Instrument type	Frequency
PID	
X TVA	At each sampling location
Oxygen indicator/Combustible	
Detector tubes:	
Personal air pump	
Other:	

Action level responses

Unknown gas/vapor PID/FID reading above background to 5 ppm: use level C protection
Unknown gas/vapor PID/FID reading 5 to 500 ppm: use level B protection
Unknown gas/vapor PID/FID reading above 500 ppm: evacuate/control the hazard
Known gas/vapor PID/FID reading greater than half the PEL: use level C protection
Known gas/vapor PID/FID reading IDLH: use SCBA/control the hazard
Oxygen below 19.5%: use SCBA/control the hazard
Combustible gas indicator: at or above 10% LEL: evacuate.
Other:

VII. DECONTAMINATION PROCEDURES

Wear disposable coveralls, disposable outer boots, and disposable outer gloves. Avoid walking on,

kneeling on, or sitting on contaminated surfaces. Avoid contaminating any non-disposable clothing or equipment. Use private contractor's decontamination facilities if established. Decontamination stations shall be set up before personnel enter the exclusion zone. Personnel and equipment leaving the exclusion zone shall be thoroughly decontaminated. Any PPE utilized will be removed, bagged, and left on site in bags or drums. Decon equipment includes garbage bags, "Wet Ones," paper towels, Visqueen, Alconox, wash tubs, water, pressure water sprayer.

The following example of personal decontamination is based on the exclusive use of disposable boot covers, gloves, and coveralls.

Steps:

1. Segregated equipment drop
2. Remove outer booties and outer gloves
3. Remove coveralls
4. Remove first pair of inner gloves
5. Remove hard hat
6. Remove respirator
7. Remove second pair of inner gloves
8. Replace hard hat and put on eye protection until leaving the site
9. Wash hands

When possible use disposable sampling equipment and leave at the site. Reusable, non-disposable equipment (stainless steel spoons, split spoons, measuring tape, etc) will be decontaminated before removal from the site. The minimum decontamination procedure for all equipment is as follows:

1. Water rinse
2. Soap wash (Alconox)
3. Water rinse
4. Air dry
5. Seal with aluminum foil

VIII. EMERGENCY PROCEDURES

The Site Safety Officer shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed.

Written Directions to the Selected Hospital (Map Attached)

Take access road out of Pierce Waste Oil to Martin Luther King Dr. Take right on MLK Dr., follow to Clearlake Avenue. Take left on Clearlake. Then right on 11th Street. Then left on Carpenter. Follow Carpenter to the West and St. John's will be on the left hand side.

Personnel Injury in the Exclusion Zone: Upon notification of an injury in the Exclusion Zone, all site personnel shall assemble at the decontamination line. The rescue team will enter the Exclusion Zone (if required) to remove the injured person to the hotline. The Site Safety Officer and Project Team Leader should evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement to the Support Zone. Appropriate first aid shall be initiated, and contact should be made for an ambulance and with the designated medical facility (if required). No persons shall

reenter the Exclusion Zone until the cause of the injury or symptoms is determined.

Personnel Injury in the Support Zone: Upon notification of an injury in the Support Zone, the Project Team Leader and Site Safety Officer will assess the nature of the injury. If the cause of the injury does not affect the performance of site personnel, operations may continue, with the on-site first aid initiated and necessary follow-up as stated above. If the injury increases the risk to others, all site personnel shall move to the decontamination line for further instructions. Activities on site will stop until the added risk is removed or minimized.

Fire/Explosion: Upon notification of a fire or explosion on site, all site personnel shall be assembled at the decontamination line. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.

Personal Protective Equipment Failure: If any site worker experiences a failure or malfunction of protective equipment that affects the protection factor, that person and his/her buddy shall immediately leave the Exclusion Zone. Reentry shall not be permitted until the equipment has been repaired or replaced.

Other Equipment Failure: If any other equipment on site fails to operate properly, the Project Team Leader and Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions taken.

In all situations, when an on-site emergency results in evacuation of the Exclusion Zone, personnel shall not re-enter until:

1. The conditions resulting in the emergency have been corrected.
2. The hazards have been reassessed.
3. The Site Safety Plan has been reviewed
4. Site personnel have been briefed on any changes in the Site Safety Plan.

First-aid equipment available on-site: First-aid kit, emergency eye wash.

List of emergency phone numbers

Police: 217/788-8311 or 911

Fire: 217/788-8444 or 911

Ambulance: 911

Hospital: 217/544-6464

IX. CERTIFICATION

Personnel signing below certify that they understand the site work plan, understand this site safety plan, and have completed the required training and medical monitoring.

Required:	40-Hour Training:	24-Hour:	None:	Medical monitoring required (yes/no):
Completed:	40-Hour:	24-Hour:	None:	Medical monitoring completed (yes/no):
Duty/Name/Signature:				

Required:	40-Hour Training:	24-Hour:	None:	Medical monitoring required (yes/no):
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Completed: 40-Hour: 24-Hour: None: Medical monitoring completed (yes/no):
Duty/Name/Signature:

Required: 40-Hour Training: 24-Hour: None: Medical monitoring required (yes/no):
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Completed: 40-Hour: 24-Hour: None: Medical monitoring completed (yes/no):
Duty/Name/Signature:

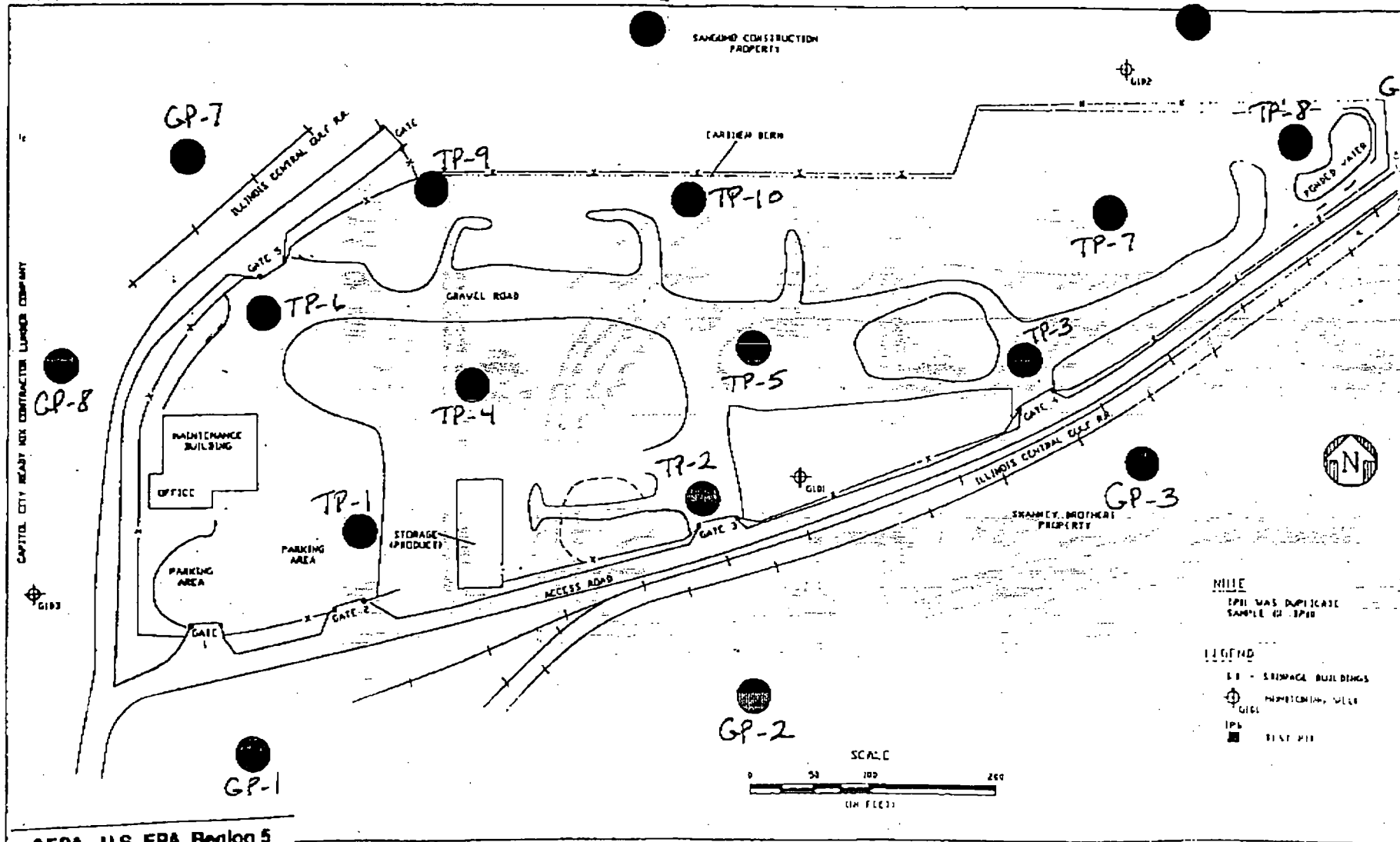
Plan prepared by: Ann Cross Signature:
Date:

Plan approved by: Signature:
Date:

SSP0700.WPD

X. APPENDICES: Appendix A: Site Map, Appendix B: Route to Hospital

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EPA U.S. EPA Region 5
EMERGENCY AND ENFORCEMENT RESPONSE BRANCH